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Highways in the United States of America  
and its possessions.

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U. S. Department of Agriculture

# HIGHWAYS IN THE UNITED STATES OF AMERICA AND ITS POSSESSIONS



A CONTRIBUTION  
OF THE BUREAU  
OF PUBLIC ROADS  
UNITED STATES  
DEPARTMENT OF  
AGRICULTURE



*The* INTERNATIONAL COLONIAL AND  
OVERSEAS EXPOSITION  
PARIS, FRANCE ~ 1931



IN 1830 PASSENGERS TRAVELED  
OVER THE NATIONAL PIKE  
IN STAGE COACHES



MODERN MOTOR TRAFFIC MOVES  
AT A HIGH SPEED OVER THE  
THREE-LANE PAVEMENT  
IN NEW JERSEY



UNITED STATES DEPARTMENT OF AGRICULTURE

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# HIGHWAYS *in the* UNITED STATES OF AMERICA AND ITS POSSESSIONS

A Contribution of  
THE BUREAU OF PUBLIC ROADS

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THE INTERNATIONAL  
COLONIAL AND OVERSEAS EXPOSITION

*Paris, France : 1931*



UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1931

1980  
1981



# HIGHWAYS IN THE UNITED STATES OF AMERICA AND ITS POSSESSIONS

A Contribution of the Bureau of Public Roads, United States Department of Agriculture

Highway development in the continental United States has only in recent years assumed the status of a rational and systematic plan of nation-wide scope. In the early American colonies the sections of roads built by the pioneers were the result of spontaneous efforts without any comprehensive plan being possible. Corresponding with or somewhere between these two extremes of colo-

nial and modern times, depending upon local conditions, may be found to-day the highway development of the colonial and insular possessions of our own and other countries. Upon this premise a brief history of highway development in the continental United States from the colonial period to the present time should be of interest.

## HIGHWAY DEVELOPMENT IN THE AMERICAN COLONIES

During the 150 years beginning with the landing of the Pilgrim Fathers on the coast of Massachusetts in 1620 and ending with the Revolutionary War in 1775, highway development made comparatively slow progress. In the region bordering along the Atlantic coast, at first a wilderness inhabited only by American Indian aborigines and wild animals, the sound of the ax and the primitive firearms of the white man became of frequent occurrence after the emigrants from across the Atlantic sailed their ships into the most accessible ports and established settlements. The five principal localities from which radiated the first travel movements of the country were in eastern Massachusetts; in the Connecticut River Valley and

Long Island Sound; around the mouth of the Hudson River; along Delaware Bay and the Delaware and Susquehanna Rivers; and in the region of Chesapeake Bay.

As in other primitive civilizations, the ocean and rivers were the principal highways until the settlements had grown to such a size that land communication became necessary for mutual trade and protection from the natives. This travel developed in a north-and-south direction paralleling the Atlantic coast; at first along rude Indian trails and over logs thrown over streams, or across the large rivers in canoe ferries. Year after year the Indian trail was cut wider until a horse and rider or pack animal could travel without great difficulty. Later these pack



trails were again widened for the rude 2-wheeled carts that subsequently gave way to 4-wheeled freight vehicles, called Conestoga wagons, and the passenger stage coaches. Thus developed the main road of the Colonies and one

of them is the most heavily-traveled road in the United States to-day—the highway known as United States Route 1, connecting Boston, New York, Philadelphia, and Baltimore.

### EARLY DEVELOPMENT CONFINED TO A NARROW BELT OF TERRITORY BORDERING THE ATLANTIC COAST

Prior to the Revolutionary War the American colonists had settled a narrow strip of land some 150 miles wide bordering on the Atlantic coast and bounded on the west by the hitherto impenetrable Appalachian Mountain barrier. All road development was restricted to this area and such work as had been done was retarded greatly by the almost constant Indian wars in which the colonists were engaged. True it was that General Forbes had built a military road across the mountains in Pennsylvania from Philadelphia to Fort Du Quesne, while General Braddock

in 1755 opened a road through the mountain wilderness to connect the same military posts with Fort Cumberland, now in Maryland. But these were not roads in general use by the colonists. Neither was this true at that time of the Wilderness Road, which the intrepid pioneer Daniel Boone located through the Cumberland Gap, and that was later to serve as the emigrant trail into Kentucky. The time was not far distant, however, when the tide of immigration was to turn westward beyond the Appalachian Mountain barrier.

### HIGHWAY DEVELOPMENT IN THE EARLY DAYS OF THE AMERICAN REPUBLIC

Subsequent to the Revolutionary War the most important development in highway construction in the United States was the macadamizing in 1792 of the 65-mile length of highway extending from Philadelphia to Lancaster, Pa., then a section of the main north-and-south highway between Philadelphia and Baltimore. The surfacing of this road with stone marked the beginning of the construction, in this country, of hard surfaces suitable for

use throughout the four seasons of the year. The mud blockade of travel in the winter months had begun to be removed.

By 1802 through freight-wagon and stage-coach services were in operation between Boston, Mass., and Savannah, Ga.—a distance of 1,200 miles. The stages made this distance, at the astonishing speed of 53 miles a day, in a total of 22½ days. Subsistence and lodging for the



passengers were provided by the taverns along the route.

Before this time the territory adjacent to the Ohio River had been opened to settlement, and the pioneers with their scanty household belongings thronged the trails across the Appalachian Mountains into the new northwest country. The most important westward line of travel had become so well defined that by 1806 the Congress of the United States began the appropriation of funds for the first Federal road construction. This road was known as the National Pike. It proceeded from Cumberland, Md.,

across the Appalachian Mountains to Wheeling, then in Virginia. This highway was later extended westward through the State capitals of Ohio, Indiana, and Illinois, to St. Louis, on the Mississippi River, from where in 1821 Daniel Boone had pioneered a commercial road to connect with his salt works in western Missouri. To-day this road, known as United States Route 40, is the principal east-and-west transcontinental route across the United States from the Atlantic to the Pacific coasts.

### THE IMPORTANCE OF LEADERSHIP IN HIGHWAY IMPROVEMENT

The importance of the contributions to highway improvement made by the national leaders during the progress of our history can not be overestimated. George Washington visioned the National Pike across the Appalachian Mountains that was later advocated by Henry Clay in Congress, the first Federal appropriation being made for its construction when Thomas Jefferson was President. Benjamin Franklin not only helped General Braddock to obtain wagons for his expedition against Fort Du Quesne but as the first postmaster general of the Col-

onies, Benjamin Franklin did much to further the cause of post-road improvement.

By 1830, with the aid of roads and waterways, the settlement of the United States had been pushed rapidly westward. In the half century following the Revolutionary War the pioneers had occupied the vast region between the Appalachian Mountains and the Mississippi River in one-third the time that was required to settle the area between the Atlantic Ocean and the Appalachian Mountain divide.

### PIONEER ROADS INTO THE FAR WEST

In 1822 the famous Santa Fé Trail into the Southwest, now New Mexico, was opened up to afford an oppor-

tunity for American trade with the newly born Republic of Mexico. Santa Fe was the Mexican trading post

nearest to the most western American settlement at what is now Independence, Mo. American traders transported their wares in the prairie schooners typical of travel in the far West in the early days.

By 1842 the Oregon country in the Pacific northwest was opened to settlement and over the Old Oregon Trail there poured a stream of emigrants in prairie schooners to form a migration the extent of which is said to be without parallel in history. Fighting hostile Indians, struggling across salt deserts under a blazing sun, cutting trails through the wilderness, and scaling snow-capped moun-

tains, these hardy pioneers laid the course for what is now known as United States Route 30.

The Mormons in 1847, attempting to establish a settlement where they could be free to observe their religious ideals, developed the Mormon Trail to Salt Lake City—their shrine. This trail beginning at Nauvoo, Ill., followed on the opposite side of the Platte River from the Oregon Trail for a long distance but the two trails joined in the South Pass across the Continental Divide in southwestern Wyoming.

### THE CALIFORNIA GOLD FRENZY

It was north of the Mormon settlement at Salt Lake City that the California Trail divided from the Oregon Trail. The route into California was the result of the cry of Gold! Gold! in 1849 which created a frenzy that attracted the attention of the entire world and thousands hit the trail for the new bonanza on the Pacific coast. It was the California and Oregon Trails that pioneered the westward extension to San Francisco of what is now known as United States Route 40. So in less than two decades the pioneers completely overran the extensive region between the Mississippi River and the Pacific coast.

Road construction at this time had not reached the stage

of orderly and progressive improvement based upon a careful study of the needs of the Nation. Such a program at that time would have been impossible. New territory undreamt of in the time of George Washington was added to the 13 original States as a nucleus as the Nation expanded westward. Such roads as were built came into existence from the spontaneous efforts of the pioneers as step by step new opportunities were opened to their vision.

The rise of the steam railroad, however, in 1830, brought to a climax the highway as the principal means of transportation and introduced an era of neglect for wagon roads.



## THE DARK AGES OF AMERICAN HIGHWAY DEVELOPMENT

From the time that the Baltimore & Ohio Railroad, the first successful railway venture in the United States, began operating, the wagon roads began to fall into disuse and decay. Travelers deserted the stage coaches on the macadamized surface of the Old National Pike and preferred to ride in the speedier railroad cars, just as 50 years before the stage coach had superseded horseback travel. It was of no avail for the stage coach owners to fight against the railroad. It was an economic improvement on old conditions that had come to stay. There was no better chance

to win than the pack horse owners had against the Conestoga freight wagons in 1790. Thus, for the 50 years or more beginning with 1830, highway transportation in the United States was in the darkest period of its history. Nevertheless, as the night is always darkest just before dawn so it was with American roads. For in 1885 there began to roll out upon the highways the 2-wheeled bicycles, called at first "safeties," which were destined to introduce later on the motor vehicle that has revolutionized the entire trend of highway improvement.

## BICYCLE TRAVEL SOON FOLLOWED BY THE AUTOMOBILE

At first bicyclists confined their journeys to the cities, but with increasing numbers their radius of travel was extended to near-by towns. The new means of transportation gained such popularity that a League of American Wheelmen was formed which voiced in no uncertain terms the highway needs of its members. Under the impetus of this organization rural roads began to be improved and bicycle paths were constructed beside many of the main highways. This desire for faster locomotion which had found expression in the bicycle has grown with the years. In 1900, less than 15 years from the introduction of the "safety," the "horseless wagons," the crude antecedents of the modern automobile, began to roll out

upon the rural roads. From that time until the present the radius of travel has increased with the mechanical improvement of the motor vehicle and the betterment of public roads. The disconnected sections of road adjacent to large cities, by 1915, had given way to continuous thoroughfares improved over long distances. The water-bound macadam surfaces on the roads that were satisfactory for steel-tired wagon traffic were unable to resist the destructive action of the motor vehicle. This destruction was multiplied many times over by 1914 when hundreds of heavy trucks began pounding over the highways. Later, in 1918, after the United States became engaged in the Great War in Europe, our light road

surfaces went to pieces rapidly under the impact of heavy trucks hauling military supplies and equipment. The old standards of road construction had then to be scrapped

and in their place substituted surfaces that would carry the new motor traffic without excessive maintenance costs.

## STATE AID AND DEVELOPMENT OF HIGHWAY DEPARTMENTS

The Federal-aid road act, however, became the means of extending to the State roads a form of assistance similar to that which the State highway departments had previously rendered to the county and local roads. Beginning in 1893 with New Jersey, the first State to adopt the principle of State participation in road building, the law provided that a central State engineering organization should act in an advisory capacity to the local road authorities. Following the example of New Jersey, State-aid road laws were passed in other States. The newer laws, however, gave more authority to the central State body and provided for its approval of the location of the roads as well as of the manner of construction. Still later

laws in other States intrusted the construction and maintenance of the main roads in each State to the so-called State highway department while the State-aid activities were restricted to the less important lateral roads.

By 1913 this latest conception of the functions of the State highway departments had been accepted in the majority of the States. The effectiveness of this principle of administration was evidenced in the improved standards of road construction. To-day it is realized that the credit for the high standards of road construction in the United States is due largely to the efficient administration of the State highway departments.

## THE FEDERAL-AID ROAD ACT BEGAN THE SYSTEMATIC IMPROVEMENT OF THE MAIN INTERSTATE ROADS

The Federal-aid road act was designed to develop an interstate system of roads and to centralize road construction in the hands of State highway departments whose personnel consisted of engineers thoroughly equipped by training and experience to expend public road funds in

the most advantageous manner. It extended Federal aid to individual State projects, the Federal Government paying half the cost of the work, in a manner similar to that previously employed by the State highway departments in extending State aid to the main county roads.



The Federal-aid road act caused the immediate organization of State highway departments in all those States which lacked these technical organizations prior to the passage of the act. It was the beginning of the scientific control of highway expenditures on a nation-wide scale. The administration of this act was intrusted to the Bureau of Public Roads in the United States Department of Agriculture. The parent organization of this bureau had been created in 1893 to gather and disseminate information with regard to highways and later on had been authorized

to build experimental roads in various sections of the country.

To carry on the work of Federal-aid highway administration most effectively the Bureau of Public Roads has expanded its testing and research program from time to time to keep abreast of the ever-changing conditions in highway transportation. The results of its experiments have been published since 1919 in the magazine *Public Roads*.

#### FEDERAL-AID HIGHWAY SYSTEM CREATED IN 1921

The Federal-aid road act of 1916 had so stimulated the development of the highways of the United States in the five years of its operation that in 1921 the National Congress passed another act providing for a Federal-aid highway system. In this system 7 per cent of all the roads in each State were eligible for inclusion. The objective was to concentrate still further the highway expenditures upon the main interstate and transcontinental roads and to articulate the highways across State boundaries. This system now embraces 194,000 miles of roads, of which at the present time, all but about 20,000 miles have been improved to some degree with Federal-aid, State, or local funds.

The rational selection of this system involved problems that are similar to those in the development of roads in insular possessions of our own and other countries. In fact the Federal-aid highway legislation has been extended to include the Hawaiian Islands of the United States. The problem has become one of coordinating to the best advantage the three means of transportation—highways, waterways, and railways. For tapping new regions highways are always the cheapest until the development has reached a stage that guarantees its permanent ability to support the more expensive railway improvement. Waterways, of course, are always the first and cheapest means of travel in newly developed countries.

## STAGE CONSTRUCTION A CARDINAL PRINCIPAL OF HIGHWAY ADMINISTRATION

The principle of stage construction of roads as practiced in the United States is especially applicable to colonial and insular possessions. Under this plan, beginning with a low type, a road is progressively improved with higher types of surface to meet the increasing demands of traffic. Stage construction must be so prosecuted that the previous work may be salvaged in the new construction. A highway may be graded and drained to satisfy the requirements of light rural traffic, later it may be surfaced with gravel as the travel increases, and finally a high-type pavement may be built when the growth in population and traffic warrants this expenditure. But each of these steps must be ordered so as to develop as much as possible the value of the preceding type of construction.

The practice of varying the method of financing highways to suit local conditions is also applicable to colonial possessions. For example, in regions rich in natural resources that may be rapidly developed, the construction of roads so promotes the productivity of the area that the number of motor vehicles may increase at an astonishing rate. Gasoline and registration fees from these motor vehicles in turn may be used to make the road development largely self-supporting. On the contrary, in localities, where the potential wealth can be developed only slowly over a period of years, the cost of road construction must be borne principally by outside sources. The problem then involves the available revenues of the parent government.

## NUMBERED SYSTEM OF UNITED STATES HIGHWAYS

To improve travel facilities over the Federal-aid highway system that had developed with the continuous improvement of long sections of road, the numbered system of United States highways was adopted in 1925 by a joint board appointed by the Secretary of Agriculture and composed of representatives of the various State highway departments and the Bureau of Public Roads. This board numbered the main east-and-west and north-and-south transcontinental roads in the Federal-aid highway system

over a total distance of 97,000 miles. Standard numbered shields were adopted for these roads and a uniform system of danger, warning, information, and caution signs was designed. These signs have now been erected in practically every State in the Union so that the transcontinental traveler may motor from coast to coast or from the Gulf of Mexico to the Canadian border without resorting to a traveler's guide so as to find the way.



## PRESENT STATUS OF HIGHWAY DEVELOPMENT IN THE UNITED STATES

Of the 3,000,000 miles of highways in the United States, an average of 1 mile of highway per square mile of territory, some 700,000 miles have been improved with some form of surfacing up to January 1, 1931. The surfaced roads are confined generally to those thoroughfares radiating from the large cities and to the main interstate and intercity routes. The bulk of the surfacing is of a low type such as gravel, crushed stone, topsoil, or sand-clay because the traffic on over 60 per cent of the roads is not sufficient to justify a higher type of surfacing.

Generally speaking, the low-type surfaces will carry without excessive wear a traffic in motor vehicles of up to 500 machines a day. The intermediate types including bituminous treatments of various kinds such as penetration bituminous macadam, mixed-in-place bituminous surfaces, bituminous surface treatments, etc., may carry from 500 to 2,000 vehicles per day depending upon the stability of the foundation. The high-type pavements including brick, cement concrete, and bituminous concrete, will carry over 2,000 vehicles per day.

## STATISTICAL DATA RELATING TO HIGHWAY IMPROVEMENT IN THE UNITED STATES AND ITS POSSESSIONS

The tables which follow are designed to give the latest available information with regard to highway mileage, income, expenditures, motor-vehicle registrations and license fees, and gasoline taxes, in the continental United

States. There is also added a general summary of road development in the territorial and insular possessions of the United States.

## SOURCE OF FURTHER INFORMATION CONCERNING HIGHWAYS IN THE UNITED STATES AND ITS POSSESSIONS

Those who wish to obtain more specific or detailed information with regard to the highways of the United States may obtain printed matter free of charge upon

written request to the Highway Education Board, 1723 N Street NW., Washington, D. C.

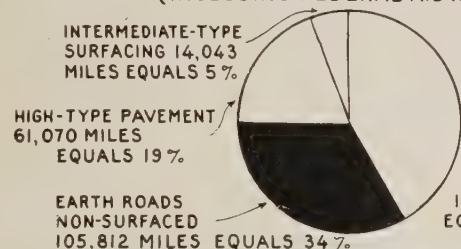
# HIGHWAY STATISTICS OF THE TERRITORIAL AND INSULAR POSSESSIONS OF THE UNITED STATES

Territory or insular possession	Total length of roads in miles	Gross area in square miles	Population	Motor vehicle registration	Area per 1 mile of road in square miles	Motor ve- hicles per mile of road	Persons per motor vehicle
Continental United States . . . . .	3,024,233	3,026,789	122,698,196	26,501,443	1	8.8	4.6
Territory of Alaska . . . . .	1,620	586,400	58,758	2,242	362	1.4	26.2
Philippine Islands . . . . .	7,854	114,400	12,859,300	31,716	15	4.0	406.0
Hawaiian Islands (Territory) . . . . .	1,717	6,406	368,336	41,829	4	24.4	8.8
Island of Porto Rico . . . . .	1,080	3,435	1,543,913	16,057	3	14.9	96.2
Island of Guam . . . . .	66	206	18,521	291	3	4.4	63.8
Virgin Islands . . . . .	179	133	22,012	559	1	3.1	39.4
American Samoa . . . . .	30	75	10,055	44	2	1.5	227.0

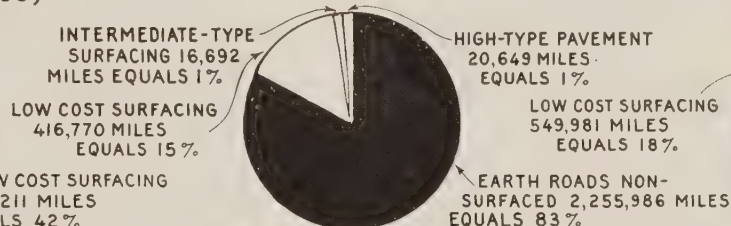


# MILEAGE OF EXISTING STATE HIGHWAYS (INCLUDING FEDERAL-AID ROADS) AND LOCAL ROADS IN THE UNITED STATES OF AMERICA ON JANUARY 1, 1930

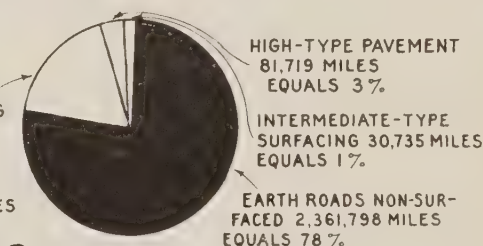
SUMMARY OF THE TYPES OF IMPROVEMENT IN THE 314,136 MILES OF STATE HIGHWAYS (INCLUDING FEDERAL-AID ROADS)



SUMMARY OF THE TYPES OF IMPROVEMENT IN THE 2,710,097 MILES OF LOCAL ROADS



SUMMARY OF THE TYPES OF IMPROVEMENT IN THE 3,024,233 MILES OF STATE AND LOCAL ROADS



## TOTAL EXISTING MILEAGE BY STATES

STATE	MILEAGE { STATE LOCAL }	TOTAL EXISTING MILEAGE AS OF JANUARY 1, 1930	STATE	MILEAGE { STATE LOCAL }	TOTAL EXISTING MILEAGE AS OF JANUARY 1, 1930
ALABAMA		67,943	NEBRASKA		93,911
ARIZONA		22,284	NEVADA		23,540
ARKANSAS		68,506	NEW HAMPSHIRE		12,035
CALIFORNIA		76,964	NEW JERSEY		17,207
COLORADO		68,974	NEW MEXICO		47,785
CONNECTICUT		14,145	NEW YORK		85,783
DELAWARE		3,777	NORTH CAROLINA		71,529
FLORIDA		30,183	NORTH DAKOTA		106,850
GEORGIA		101,422	OHIO		84,553
IDAHO		39,137	OKLAHOMA		120,760
ILLINOIS		97,287	OREGON		51,646
INDIANA		73,661	PENNSYLVANIA		90,676
IOWA		103,328	RHODE ISLAND		2,682
KANSAS		132,244	SOUTH CAROLINA		57,678
KENTUCKY		61,261	SOUTH DAKOTA		120,275
LOUISIANA		35,553	TENNESSEE		67,635
MAINE		21,002	TEXAS		187,870
MARYLAND		14,733	UTAH		23,429
MASSACHUSETTS		18,762	VERMONT		15,042
MICHIGAN		81,015	VIRGINIA		59,698
MINNESOTA		110,553	WASHINGTON		43,922
MISSISSIPPI		61,957	WEST VIRGINIA		34,799
MISSOURI		110,592	WISCONSIN		81,415
MONTANA		67,072	WYOMING		41,158

GRAND TOTAL 3,024,233 MILES  
SURFACED 662,435 MILES  
NON-SURFACED 2,361,798 MILES



STATE HIGHWAY MILEAGE 10 } %  
LOCAL ROAD MILEAGE 90 } %

# MILEAGE OF EXISTING FEDERAL-AID ROADS IN THE UNITED STATES OF AMERICA ON JULY 1, 1930

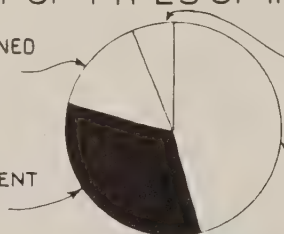
## SUMMARY OF TYPES OF IMPROVEMENT

GRADED AND DRAINED  
12,367 MILES  
EQUALS 15%

INTERMEDIATE-TYPE  
SURFACING 4,800 MILES  
EQUALS 6%

HIGH-TYPE PAVEMENT  
27,797 MILES  
EQUALS 33%

LOW-COST SURFACING  
38,679 MILES  
EQUALS 46%



## TOTAL EXISTING MILEAGE BY STATES

STATE	MILEAGE SURFACED GRADED AND DRAINED	TOTAL MILEAGE OF EXISTING FEDERAL-AID ROADS AS OF JULY 1, 1930	STATE	MILEAGE SURFACED GRADED AND DRAINED	TOTAL MILEAGE OF EXISTING FEDERAL-AID ROADS AS OF JULY 1, 1930
ALABAMA		2,153.8	NEBRASKA		3,669.1
ARIZONA		810.3	NEVADA		1,219.2
ARKANSAS		1,741.4	NEW HAMPSHIRE		352.7
CALIFORNIA		1,880.2	NEW JERSEY		507.8
COLORADO		1,208.1	NEW MEXICO		1,904.4
CONNECTICUT		243.3	NEW YORK		2,491.0
DELAWARE		251.0	NORTH CAROLINA		1,780.6
FLORIDA		503.5	NORTH DAKOTA		4,262.6
GEORGIA		2,703.3	OHIO		2,185.7
IDAHO		1,194.1	OKLAHOMA		1,890.4
ILLINOIS		2,056.1	OREGON		1,150.4
INDIANA		1,481.6	PENNSYLVANIA		2,341.9
IOWA		2,979.7	RHODE ISLAND		184.7
KANSAS		2,833.9	SOUTH CAROLINA		1,868.5
KENTUCKY		1,530.2	SOUTH DAKOTA		3,445.1
LOUISIANA		1,352.4	TENNESSEE		1,260.9
MAINE		534.8	TEXAS		6,835.6
MARYLAND		630.7	UTAH		981.2
MASSACHUSETTS		657.4	VERMONT		255.6
MICHIGAN		1,602.0	VIRGINIA		1,467.9
MINNESOTA		3,936.1	WASHINGTON		904.8
MISSISSIPPI		1,820.7	WEST VIRGINIA		710.1
MISSOURI		2,486.8	WISCONSIN		2,246.2
MONTANA		1,717.4	WYOMING		1,708.7
			HAWAII		41.2

GRAND TOTAL 83,975.1 MILES

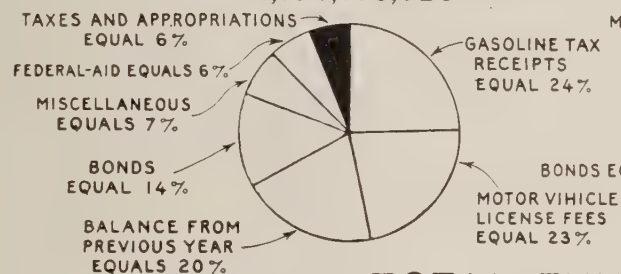


THE COMPLETED FEDERAL-AID ROADS IF PLACED  
END TO END WOULD REACH  $3\frac{1}{3}$  TIMES AROUND  
THE EARTH AT THE EQUATOR

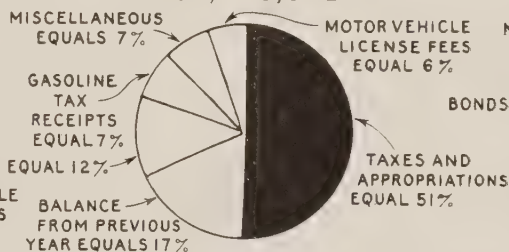


# INCOME AND FUNDS AVAILABLE FOR STATE HIGHWAY AND LOCAL ROADS IN THE UNITED STATES OF AMERICA FOR THE YEAR 1929

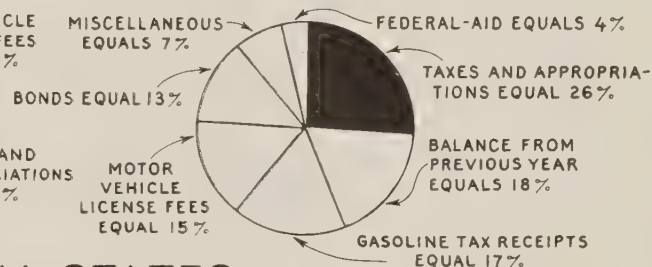
SUMMARY OF  
SOURCES OF  
STATE HIGHWAY INCOME  
\$1,194,775,026



SUMMARY OF  
SOURCES OF  
LOCAL ROAD INCOME  
\$953,529,592



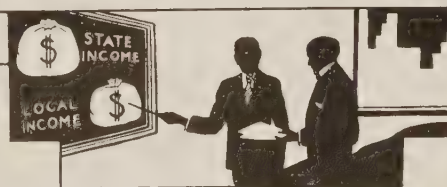
SUMMARY OF SOURCES OF  
TOTAL STATE HIGHWAY AND  
LOCAL ROAD INCOME  
\$2,148,304,618



## TOTAL FUNDS AVAILABLE BY STATES

STATE	INCOME { STATE LOCAL	TOTAL FUNDS AVAILABLE FROM ALL SOURCES	STATE	INCOME { STATE LOCAL	TOTAL FUNDS AVAILABLE FROM ALL SOURCES
ALABAMA		35,242,573	NEBRASKA		21,845,169
ARIZONA		7,906,475	NEVADA		4,406,772
ARKANSAS		54,144,679	NEW HAMPSHIRE		14,203,517
CALIFORNIA		91,145,691	NEW JERSEY		75,098,489
COLORADO		15,275,519	NEW MEXICO		8,378,599
CONNECTICUT		18,058,003	NEW YORK		194,924,013
DELAWARE		7,954,888	NORTH CAROLINA		60,101,808
FLORIDA		40,991,673	NORTH DAKOTA		11,414,872
GEORGIA		20,936,819	OHIO		118,537,659
IDAHO		12,637,816	OKLAHOMA		31,820,565
ILLINOIS		76,536,847	OREGON		26,590,034
INDIANA		71,905,642	PENNSYLVANIA		171,342,514
IOWA		71,180,021	RHODE ISLAND		8,022,418
KANSAS		46,633,365	SOUTH CAROLINA		49,466,133
KENTUCKY		29,456,693	SOUTH DAKOTA		13,402,018
LOUISIANA		39,630,876	TENNESSEE		68,538,191
MAINE		17,792,613	TEXAS		88,829,707
MARYLAND		22,969,498	UTAH		6,879,338
MASSACHUSETTS		39,763,470	VERMONT		14,640,725
MICHIGAN		112,544,487	VIRGINIA		30,744,423
MINNESOTA		61,427,534	WASHINGTON		26,931,706
MISSISSIPPI		37,190,798	WEST VIRGINIA		41,704,165
MISSOURI		51,751,114	WISCONSIN		62,475,749
MONTANA		10,295,895	WYOMING		4,633,045

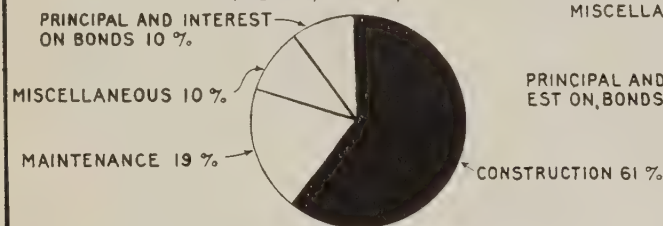
GRAND TOTAL  
INCOME  
\$2,148,304,618



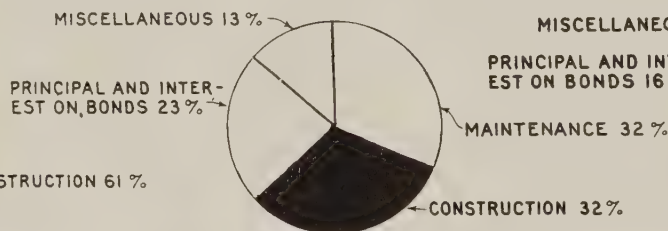
STATE HIGHWAYS 55 } %  
LOCAL ROADS 45 }

# EXPENDITURES FOR STATE (INCLUDING FEDERAL-AID) HIGHWAYS AND LOCAL ROADS IN THE UNITED STATES OF AMERICA FOR 1929

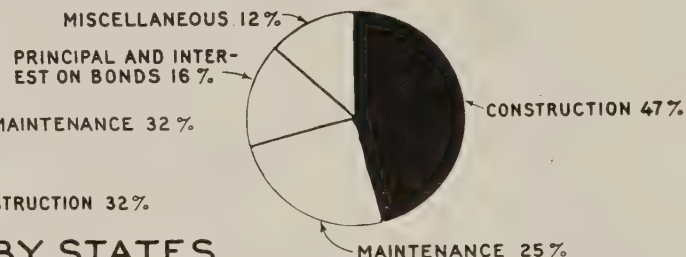
## SUMMARY OF EXPENDITURES FOR STATE HIGHWAYS (INCLUDING FEDERAL-AID) \$ 910,485,291



## SUMMARY OF EXPENDITURES FOR LOCAL ROADS \$ 807,714,604



## SUMMARY OF EXPENDITURES FOR STATE HIGHWAYS AND LOCAL ROADS \$ 1,718,199,895



## TOTAL EXPENDITURES BY STATES

STATE	EXPENDITURES { STATE LOCAL }	TOTAL STATE AND LOCAL EXPENDITURES FOR 1929	STATE	EXPENDITURES { STATE LOCAL }	TOTAL STATE AND LOCAL EXPENDITURES FOR 1929
ALABAMA		\$ 32,018,672	NEBRASKA		\$ 19,615,157
ARIZONA		7,222,387	NEVADA		3,742,219
ARKANSAS		49,826,429	NEW HAMPSHIRE		12,094,233
CALIFORNIA		62,968,395	NEW JERSEY		65,351,199
COLORADO		12,776,645	NEW MEXICO		7,233,952
CONNECTICUT		16,947,151	NEW YORK		114,664,096
DELAWARE		7,130,041	NORTH CAROLINA		49,282,891
FLORIDA		29,884,963	NORTH DAKOTA		9,271,322
GEORGIA		19,196,418	OHIO		99,843,504
IDAHO		9,934,382	OKLAHOMA		27,950,135
ILLINOIS		70,038,610	OREGON		24,407,834
INDIANA		60,897,202	PENNSYLVANIA		123,815,929
IOWA		62,216,441	RHODE ISLAND		6,434,476
KANSAS		41,082,134	SOUTH CAROLINA		38,497,270
KENTUCKY		25,254,625	SOUTH DAKOTA		14,011,034
LOUISIANA		29,115,101	TENNESSEE		42,881,618
MAINE		16,805,653	TEXAS		67,818,884
MARYLAND		18,981,825	UTAH		5,866,050
MASSACHUSETTS		34,643,598	VERMONT		13,568,124
MICHIGAN		97,623,025	VIRGINIA		23,188,201
MINNESOTA		48,559,376	WASHINGTON		25,451,706
MISSISSIPPI		27,442,415	WEST VIRGINIA		32,747,799
MISSOURI		44,624,650	WISCONSIN		51,243,050
MONTANA		9,812,815	WYOMING		4,216,189

GRAND TOTAL  
EXPENDITURES  
\$ 1,718,199,895



STATE HIGHWAYS 53 } %  
LOCAL ROADS 47 }



# MOTOR VEHICLE REGISTRATIONS IN THE UNITED STATES OF AMERICA



AUTOMOBILES, TAXIS  
AND BUSES



MOTOR TRUCKS AND TRAILERS  
ROAD TRACTORS



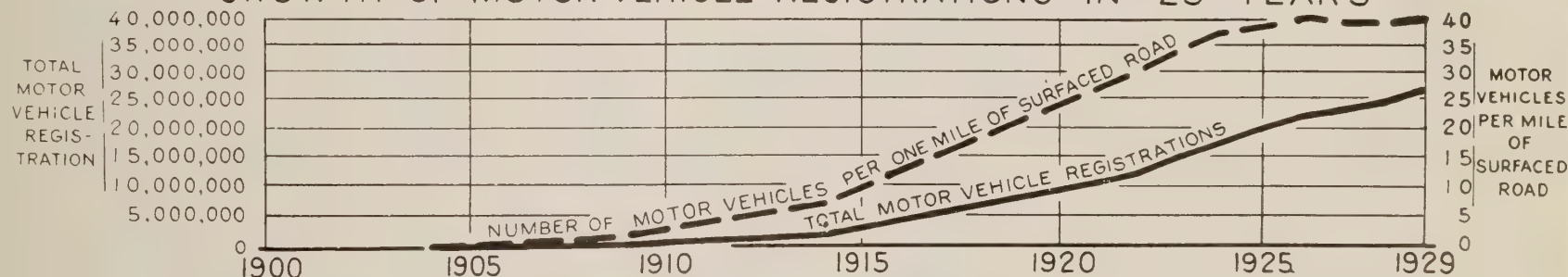
MOTOR CYCLES

GRAND TOTAL  
MOTOR VEHICLE REGISTRATIONS 26,501,443  
FOR 1929

## TOTAL MOTOR VEHICLE REGISTRATION BY STATES FOR 1929

STATES	MOTOR VEHICLE REGISTRATION	STATES	MOTOR VEHICLE REGISTRATION
ALABAMA	285,533	NEBRASKA	418,226
ARIZONA	109,013	NEVADA	31,915
ARKANSAS	233,128	NEW HAMPSHIRE	108,880
CALIFORNIA	1,974,341	NEW JERSEY	832,332
COLORADO	303,489	NEW MEXICO	78,374
CONNECTICUT	328,063	NEW YORK	2,263,259
DELAWARE	54,960	NORTH CAROLINA	483,602
FLORIDA	345,977	NORTH DAKOTA	188,046
GEORGIA	358,905	OHIO	1,766,614
IDAHO	118,074	OKLAHOMA	570,791
ILLINOIS	1,615,088	OREGON	269,007
INDIANA	866,715	PENNSYLVANIA	1,733,283
IOWA	784,450	RHODE ISLAND	134,009
KANSAS	581,223	SOUTH CAROLINA	231,274
KENTUCKY	332,848	SOUTH DAKOTA	204,199
LOUISIANA	280,868	TENNESSEE	362,431
MAINE	184,506	TEXAS	1,348,107
MARYLAND	319,873	UTAH	112,661
MASSACHUSETTS	817,704	VERMONT	93,030
MICHIGAN	1,395,102	VIRGINIA	387,205
MINNESOTA	730,399	WASHINGTON	442,341
MISSISSIPPI	250,011	WEST VIRGINIA	268,888
MISSOURI	756,680	WISCONSIN	793,502
MONTANA	140,387	WYOMING	60,680
		DISTRICT OF COLUMBIA	151,450

## GROWTH OF MOTOR VEHICLE REGISTRATIONS IN 25 YEARS

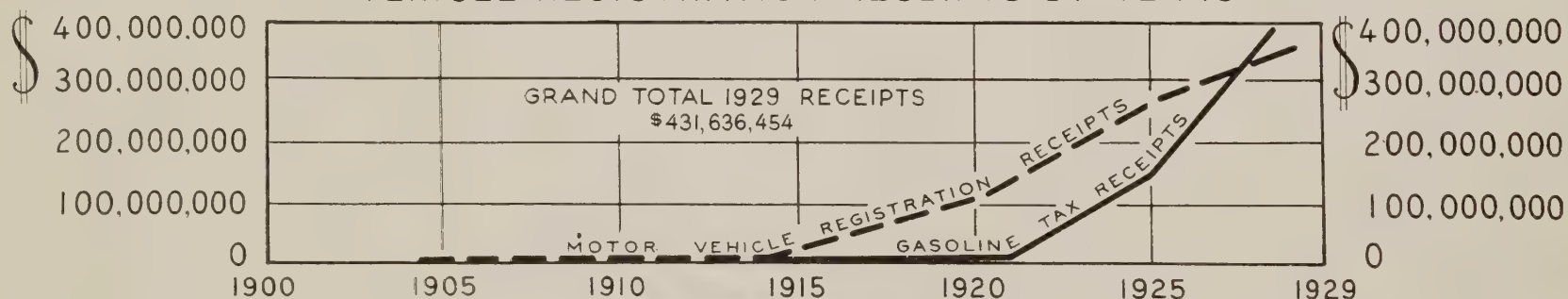


# GASOLINE TAXES IN THE UNITED STATES OF AMERICA

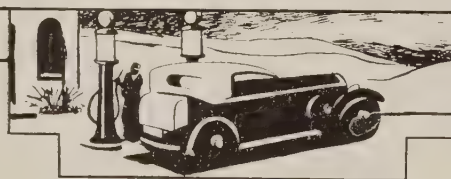
## GASOLINE TAX RECEIPTS FOR 1929 BY STATES

STATE	RATE OF TAX CENTS PER GALLON	TOTAL RECEIPTS	STATE	RATE OF TAX CENTS PER GALLON	TOTAL RECEIPTS
ALABAMA	4	7,105,009	NEBRASKA	4	7,799,479
ARIZONA	4	2,559,839	NEVADA	4	652,301
ARKANSAS	5	6,681,029	NEW HAMPSHIRE	4	2,267,052
CALIFORNIA	3	34,192,087	NEW JERSEY	2	9,996,104
COLORADO	4	5,218,064	NEW MEXICO	5	2,289,767
CONNECTICUT	2	4,097,175	NEW YORK	2	19,087,392
DELAWARE	3	1,935,947	NORTH CAROLINA	5	12,006,384
FLORIDA	6	12,231,336	NORTH DAKOTA	3	1,801,102
GEORGIA	6	10,224,108	OHIO	4	34,082,188
IDAHO	4	1,946,359	OKLAHOMA	4	10,841,609
ILLINOIS	3	11,659,778	OREGON	3	4,542,602
INDIANA	4	15,610,540	PENNSYLVANIA	4	35,757,816
IOWA	3	9,355,785	RHODE ISLAND	2	1,545,961
KANSAS	3	8,171,205	SOUTH CAROLINA	6	6,871,076
KENTUCKY	5	7,742,564	SOUTH DAKOTA	4	3,545,765
LOUISIANA	4	6,978,651	TENNESSEE	5	9,290,853
MAINE	4	3,708,682	TEXAS	4	22,317,494
MARYLAND	4	6,297,168	UTAH	3½	1,979,610
MASSACHUSETTS	2	9,758,816	VERMONT	4	1,703,091
MICHIGAN	3	21,312,929	VIRGINIA	5	9,894,941
MINNESOTA	3	8,892,125	WASHINGTON	3	5,943,039
MISSISSIPPI	5	7,176,126	WEST VIRGINIA	4	4,873,298
MISSOURI	2	7,680,672	WISCONSIN	2	7,485,039
MONTANA	5	2,802,017	WYOMING	4	1,296,299
			DISTRICT OF COLUMBIA	2	1,428,181

GROWTH OF TOTAL GASOLINE TAX RECEIPTS AND MOTOR  
VEHICLE REGISTRATION RECEIPTS BY YEARS



AVERAGE RATE 3.22  
CENTS PER GALLON



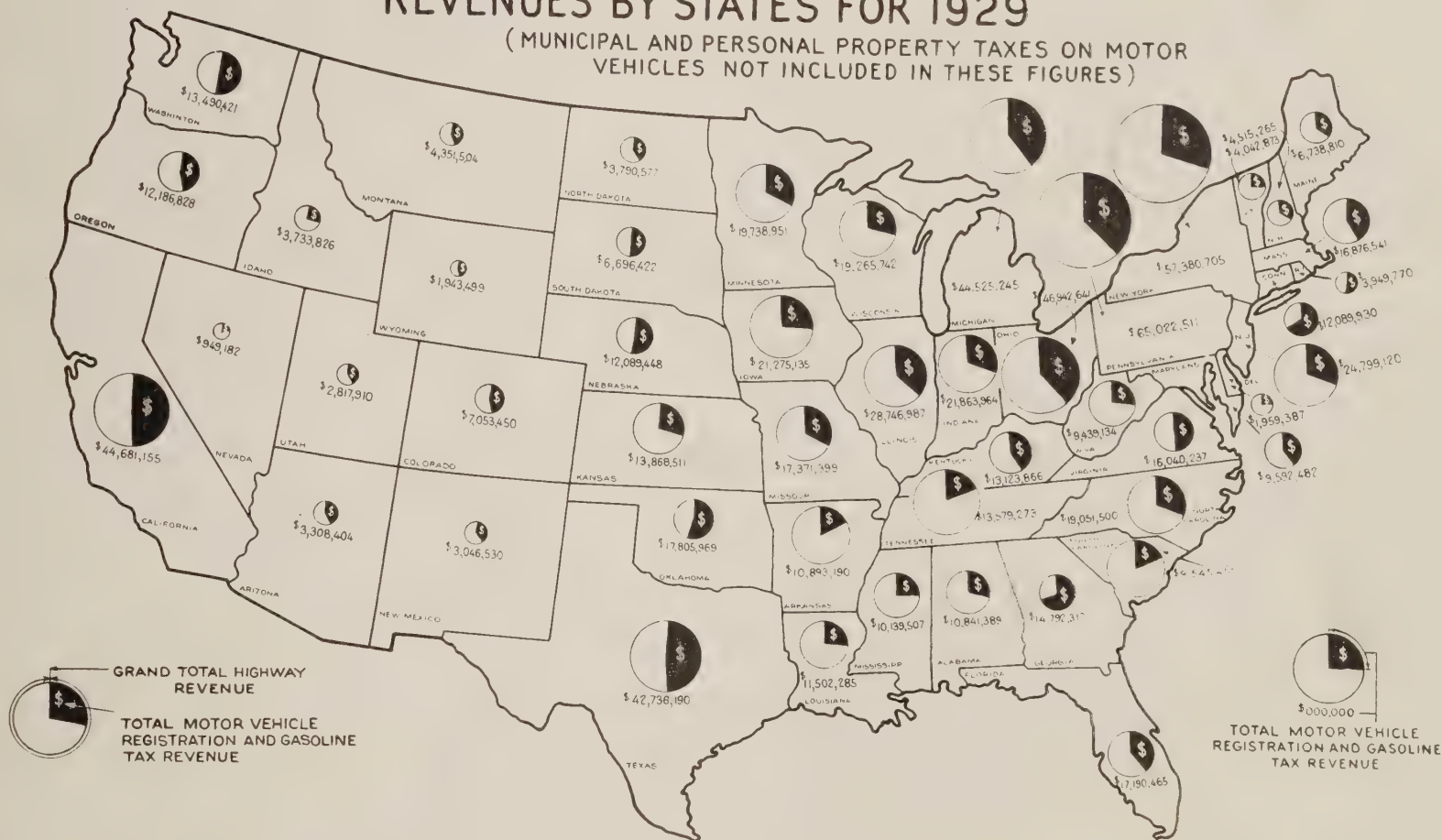
SUMMARY OF GASOLINE TAX RATES

RATE IN CENTS	NUMBER OF STATES	RATE IN CENTS	NUMBER OF STATES
2	7	4	19
3	10	5	8
3½	1	6	3



# MOTOR VEHICLE REGISTRATION AND GASOLINE TAX RECEIPTS IN THE UNITED STATES AS COMPARED WITH THE TOTAL HIGHWAY REVENUES BY STATES FOR 1929

(MUNICIPAL AND PERSONAL PROPERTY TAXES ON MOTOR VEHICLES NOT INCLUDED IN THESE FIGURES)



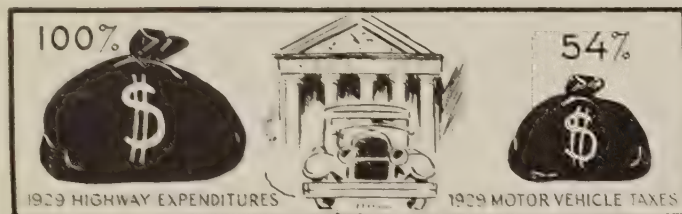
GRAND TOTAL RECEIPTS  
FOR 1929



\$ 777,385,902

# 1929 MOTOR TAXES 54 PER CENT OF TOTAL HIGHWAY EXPENDITURES

## 1929 MOTOR VEHICLE TAXES

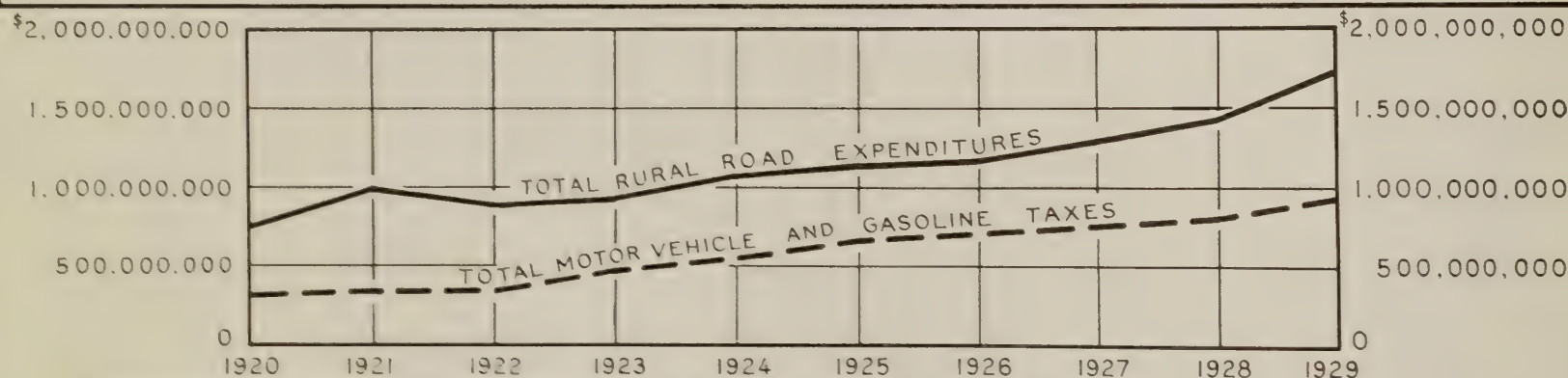


REGISTRATION FEES	-----	\$347,843,543
GASOLINE TAXES	-----	431,636,454
MUNICIPAL TAXES	-----	20,000,000
PERSONAL PROPERTY TAXES	-----	130,000,000
GRAND TOTAL		\$929,479,997

1929 GRAND TOTAL—FEDERAL, STATE, AND LOCAL \$1,718,199,895  
RURAL ROAD EXPENDITURES

54%

IN THE LAST 10 YEARS MOTOR VEHICLE TAXES HAVE BEEN PAYING FOR A SUBSTANTIAL SHARE OF RURAL ROAD EXPENDITURES







A CENTURY AGO 20 DAYS WERE  
REQUIRED TO CARRY FREIGHT  
IN CONESTOGA WAGONS  
FROM PHILADELPHIA  
TO PITTSBURGH



A TWENTIETH CENTURY FREIGHT  
CARRIER—A SIX-WHEEL MOTOR TRUCK  
TRANSPORTING COTTON IN A SOUTHERN  
STATE AT RATE OF 45 MILES AN HOUR







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